

REMARKS/ARGUMENTS

Claims 1-4, 26, 27 and 35 are pending herein. Claims 1 and 26 have been amended to include the features of cancelled claims 32-34. Claim 35 has been amended to depend from claim 1. Applicants respectfully submit that no new matter has been added.

This Amendment is proper under Rule 116 and should thus be entered, because the changes to the claims merely incorporate dependent claims that have already been considered by the PTO.

Applicants thank Examiner Lesperance for courtesies extended to Applicants' undersigned representative during a telephonic interview on June 21, 2004. The substance of that interview has been incorporated into the following remarks.

1. Claims 1, 2 and 32-34 were rejected under §102(e) over Akimoto et al. Claims 32-34 have been cancelled without prejudice or disclaimer, and the subject matter thereof has been added to claim 1. To the extent that this rejection might be applied against amended claim 1, it is respectfully traversed.

Claim 1 recites a display system comprising a display and a display area-separating section for separating a display area into a moving picture display area and a still picture display area. A gradational expression of the moving picture display area is formed by temporal modulation of a plurality of picture elements to have different ON/OFF states for each frame of said moving picture, and a gradational expression of the still picture area is formed by fixing a plurality of respective picture elements in an ON/OFF state.

Fig. 59 is a block diagram of the display system showing the display controller providing outputs for moving image data and static (still) picture data. As supported by page 110, line 18-- page 111, line 12, a moving picture area and a still picture area can exist on the

same display by dividing the display controller into a circuit system corresponding to the moving picture and a circuit system corresponding to the still picture.

The gradational expression (i.e., the level of brightness with respect to each dot of each individual pixel) of the moving picture display area is formed by temporal modulation. Beginning on page 55, line 18, through page 88, line 21 of the specification, two different methods comprising six different embodiments of gradational control of the moving picture area by temporal modulation are disclosed. For each method, the gradational expression of the moving picture area is formed by dividing each display frame of each picture into subfields for each pixel of the display and driving the pixel to emit light (or not emit light) for each subfield. In the subfield driving method (e.g., claim 35), each subfield represents a different length of time for the light to be emitted from the pixel. In the linear subfield method, each subfield represents the same length of time for the light to be emitted from the pixel. The disclosed temporal modulation methods enable the use of multiple output, low-cost integrated circuits (ICs) in the display as opposed to complex, high-cost ICs such as PWM ICs, for example. Therefore, the claimed method contributes significantly to a low-cost thin type display.

The gradational expression of the still picture area is formed by fixing respective picture elements in an ON or OFF state without using the subfield driving or linear subfield driving methods used for the moving picture area (as supported by page 110, lines 18-23 of the specification, for example). This method of gradational expression of the still picture area consumes less electric power than gradational expression by temporal modulation, and therefore reduces the overall electric power consumption of the display.

Akimoto discloses a TN (twisted nematic) mode liquid crystal display system wherein the display can be divided into a moving picture area and a still picture area where each pixel is turned ON or OFF by a combination of control signals derived by a write signal generating

circuit. The PTO argued that if two neighboring areas are different from each other and have different gradation precision, it is inherent that the gradational expression of the two areas are separately formed. However, Applicants respectfully submit that Akimoto does not teach or suggest that the gradational expression of the moving picture area is formed by means of temporal modulation and the gradational expression of the still picture area is formed by fixing respective picture elements in an ON/OFF state, as recited in pending claim 1.

Akimoto further teaches that the two display areas can have different frame rates because the moving image does not require as high of a precision as the still image. Akimoto further discloses a two gradation *still* image output circuit which eliminates the need for an A/D converter and thereby reduces power consumption. Again, however, Applicants respectfully submit that Akimoto does not teach or suggest that the gradational expression of the moving picture area is formed by means of temporal modulation and the gradational expression of the still picture area is formed by fixing respective picture elements in an ON/OFF state, as claimed.

For at least the foregoing reasons, Applicants respectfully submit that claim 1 defines patentable subject matter over Akimoto and thus is in condition for allowance. Claim 2 depends from claim 1, which Applicants respectfully submit is in condition for allowance for at least the foregoing reasons. Accordingly, Applicants respectfully submit that claim 2 defines patentable subject matter over Akimoto and thus is in condition for allowance.

2. Claim 35 was rejected under §103(a) over Akimoto et al. in view of Denda et al. This rejection is respectfully traversed. Claim 35 has been amended to depend from claim 1, which Applicants respectfully submit is in condition for allowance for the reasons explained

above. Accordingly, Applicants respectfully submit that claim 35 defines patentable subject matter over the prior art and thus is in condition for allowance.

3. Claims 3 and 26 were rejected under §103(a) over Akimoto in view of Yamamoto et al. To the extent that this ground of rejection might be applied against amended claim 26, it is respectfully traversed.

Claim 26 has been amended in the same manner as claim 1, so a specific discussion of claim 26 will be omitted here.

The disclosure of Akimoto has been discussed above. Yamamoto discloses a video display apparatus including a network constructed among train stations to provide images to the individual display devices. The PTO argued that it would have been obvious to utilize the network disclosed by Yamamoto in the image display device disclosed by Akimoto.

As previously argued, Akimoto does not disclose or suggest that the gradational expression of the moving picture area is formed by temporal modulation and the gradational expression of the still picture area is formed by fixing respective picture elements in an ON/OFF state, as claimed. Yamamoto does not overcome this deficiency. Therefore, Applicants respectfully submit that claim 26 defines patentable subject matter over the prior art and thus is in condition for allowance.

Claim 3 depends from claim 1 which Applicants respectfully submit is in condition for allowance for at least the foregoing reasons. Accordingly, Applicants respectfully submit that claim 3 defines patentable subject matter over the prior art and thus is in condition for allowance.

4. Claim 4 was rejected under §103(a) over Akimoto et al. in view of Takeuchi et al. and claim 27 was rejected under §103(a) over Akimoto et al. in view of Yamamoto et al. further in view of Takeuchi et al. Claim 4 depends from claim 1 and claim 27 depends from claim 26, which Applicants respectfully submit are in condition for allowance for at least the foregoing reasons. Accordingly, Applicants respectfully submit that claims 4 and 27 define patentable subject matter over the prior art and thus are in condition for allowance.

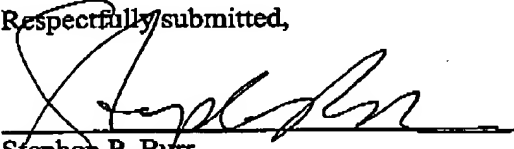
For at least the foregoing reasons, Applicants respectfully submit that this application is in condition for allowance. Accordingly, the PTO is requested to issue a Notice of Allowance as soon as possible.

If Examiner Lesperance believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, he is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

July 2, 2004
Date

Respectfully submitted,


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